

Patent claims

1. A strand-guiding roll for supporting and guiding  
5 cast metal strands in a continuous casting  
installation, having a central rotatable shaft (1) and  
having at least one roll shell (3) supported fixed  
against rotation on this shaft, characterized in that  
the roll shell (3) is supported via support rings (4)  
10 on the shaft (1), in that an annular space (6) which is  
axially delimited by the support rings (4) is formed  
between the shaft (1) and the roll shell (3), and the  
annular space (6) is designed as a coolant conduit.
- 15 2. The strand-guiding roll as claimed in claim 1,  
characterized in that sealing elements (20, 21),  
preferably sealing rings inserted in annular grooves,  
are arranged between the support rings (4) and the roll  
shell (3) and between the support rings (4) and the  
20 central shaft (1).
3. The strand-guiding roll as claimed in claim 1 or  
2, characterized in that the annular space (6), which  
is designed as a coolant conduit, is connected to a  
25 coolant line (12, 18) arranged in the central shaft (1)  
via radial branch lines (13, 17) for supplying and  
discharging a coolant.
- 30 4. The strand-guiding roll as claimed in one of the  
preceding claims, characterized in that the radial  
branch lines (13, 17) open out within the longitudinal  
extent of the support rings (4) into an annular groove  
(14, 16) in the support ring (4) which is open toward  
the annular space (6) via a multiplicity of outlet  
35 openings (19).
5. The strand-guiding roll as claimed in one of the  
preceding claims, characterized in that the roll shell  
(3) is secured against rotation with respect to the

shaft (1) by a rotation-preventing means (5), preferably a feather key, and the rotation-preventing means (5) passes through the annular space (6).

5 6. The strand-guiding roll as claimed in claim 1, characterized in that two support rings (4), which support a roll shell (3) on the shaft (1), are connected to form a support-ring sleeve (26), and an annular space (6), the axial extent of which is  
10 delimited by the support rings (4), is formed between the roll shell (3) and the support-ring sleeve.

7. The strand-guiding roll as claimed in claim 6, characterized in that sealing elements (20, 21),  
15 preferably sealing rings inserted in annular grooves, are arranged between the support rings (4) of the support-ring sleeve (26) and the roll shell (3) and between the support rings (4) and the central shaft (1).

20 8. The strand-guiding roll as claimed in claim 6 or 7, characterized in that the annular space (6) is designed as a coolant conduit, which is connected to a coolant line (12, 18) arranged in the central shaft (1) via radial branch lines (13, 17, 29, 30) for supplying  
25 and discharging a coolant.

9. The strand-guiding roll as claimed in one of claims 6 to 8, characterized in that the roll shell (3) is secured against rotation with respect to the shaft  
30 (1) by a rotation-preventing means (5), preferably a feather key, and the rotation-preventing means (5) passes through the annular space (6) and the support-ring sleeve (26).

35 10. The strand-guiding roll as claimed in one of the preceding claims, characterized in that the coolant line (12) for supplying coolant which runs within the central shaft (1) starts from one end side of the central shaft, and the coolant line (18) for discharging coolant

arranged in the central shaft opens out at the opposite end side of the central shaft, and each coolant line (12, 18) is assigned a rotary connection piece (10, 11).

- 5 11. The strand-guiding roll as claimed in one of the preceding claims, characterized in that the coolant lines (12, 18) which run within the central shaft (1) open out in one end side of the central shaft, and these coolant lines are assigned a multiple rotary  
10 connection piece.